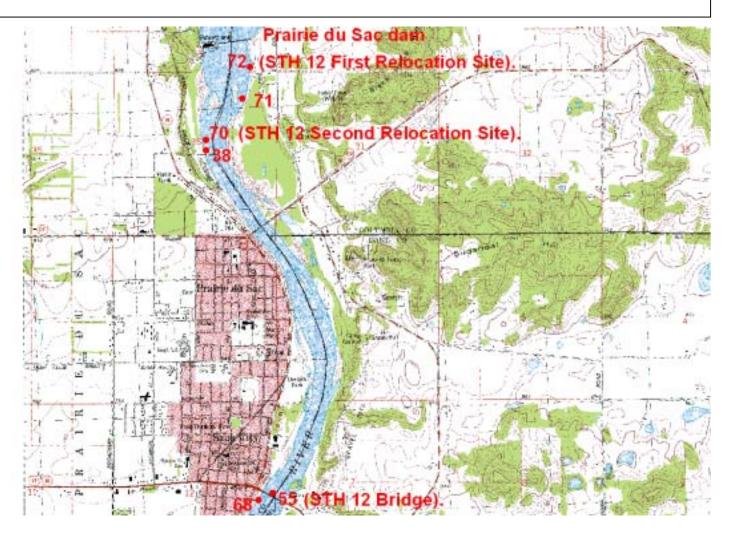


This is a report on the 2002 brood stock collection and stockpiling of *Lampsilis higginsii* in the Wisconsin River, near Prairie du Sac, Wisconsin during May, July and August of 2002. This effort was part of mussel propagation related to the continued operation and maintenance of the Mississippi River System Navigation project by the U. S. Army Corps of Engineers in cooperation with the associated, multi-agency Mussel Coordination Team.

Persons involved in these 2002 activities were staff from the Minnesota Department of Natural Resources, U. S. Army Corps of Engineers, U. S. Fish and Wildlife Service and the Wisconsin Department of Natural Resources.

During 2002, we collected potential *L. higginsii* brood stock during May 7th and 13th for use at the Genoa National Fish Hatchery for artificial propagation. During these same dates as well as July 31st and August 1st, we stockpiled brood stock and other mussels for future use in artificial propagation.

Figure 1. 2002 Sampling and Collection Station Locations, Wisconsin River near Prairie du Sac, Wisconsin.



In May, we collected two female *L. higginsii*, originally collected from Station 55 during an unrelated mussel relocation (see Havlik, 2003) at the State Highway 12 bridge (see Figure 1 and Table 1). One of these mussels, tag number "02", was taken to the Genoa National Fish Hatchery in a cooler containing aerated river water to be used for artificial propagation. This mussel was found gravid and contained mature, usable glochidia. It was used to infect 300 smallmouth bass which had the potential to drop an estimated 16, 500 juveniles. These 300 infected smallmouth bass were released at

Station 68 on May 29, 2002. This mussel (tag number "02") was returned to Station 72, which was the first bridge relocation site, on May 13, 2002. The other, a non-gravid female (tag number "08") was replaced to Station 72 immediately after collection. Both specimens had a tissue sample taken for future genetic analysis.

Table 1. Station Locations on the Wisconsin River near Prairie du Sac Sampled During 2002.

STATION NUMBER	WISCONSIN RIVER MILE	LEGAL DESCRIPTION	LATITUDE & LONGITUDE	COMMENTS
55	89.35	Twp. 9N, Rng. 6E, Sec. 12, NE of NE of SE. Sauk & Dane counties, WI	43°16'12.8"N 89°43'11.5"W	State Hwy. 12 bridge.
38	91.58	Twp. 10N, Rng. 6E, Sec. 36, SW of SW of NE. Sauk County, WI.	43°18'02.0"N 89°43'40.0"W	Collection station off of VFW Park.
70	91.69	Twp. 10N, Rng. 6E, Sec. 36, SW of SW of NE. Sauk County, WI.	43°18'05.2"N 89°43'40.2"W	Hwy 12 Second Relocation Station.
71	91.99	Twp. 10N, Rng. 6E, Sec. 36, SW of NE of NE. Columbia County, WI.	43°18'18.3"N 89°43'24.2"W	Collection station on E. side of Island.
72	92.15	Twp. 10N, Rng. 6E, Sec. 25, SW of SW of SE. Columbia County, WI.	43°18'28.4"N 89°43'20.8"W	Hwy 12 First Relocation Station.
68	89.16	Twp. 9N, Rng. 6E, Sec. 12, NE of NE of SE. Sauk County, WI.	43°16'10.6"N 89°43'17.9"W	Free-ranging smallmouth bass release station.

Because of unsatisfactory habitat conditions at Station 72, the first bridge relocation site, the contractor for the bridge relocation, Malacological Consultants, moved about 13 of the 26 mussels, including one of the two *L. higginsii*, to the second bridge relocation site at Station 70. Malacological Consultants was unable to locate *L. higginsii* number "02" as well as about half of the non-federally listed relocated mussels.

On July 31st and August 1st 2002, a substantial effort was made to locate and stockpile *L. higginsii* for future use as brood stock. We also collected tissue samples from these as well as *Lampsilis siliquoidea* for genetic analysis. During this summer stockpiling effort, we collected a total of 5 additional *L. higginsii* (Table 2) as well as 3 *L. siliquoidea*. These 8 mussels were stockpiled at Station 70 soon after initial collection.

We found a total of 7 *L. higginsii* in the Wisconsin River during 2002 (Table 2). Five of these were females and 2 were males. Of these 5 females, only one was gravid. This represents a very low brooding rate compared to data from the St. Croix and Mississippi rivers. This low brooding rate may be explained by the temporal period some of these mussels were collected. Three of the five females were collected during late July and early August. During this time of year, marsupial contents are not as obvious during gross examination because they are near the beginning of their brooding cycle. Therefore, it's possible that these three *L. higginsii* were not brooding or we did not detect brooding in our examinations although one (tag number 934) appeared to be a sterile female based on gross anatomy of the marsupia.

Table 2. Specimen Specific Mussel Data Collected during 2002 from the Wisconsin River near Prairie du Sac.

TAXON	TAG NUMBER	LIVING OR DEAD	DATE	STATION NUMBER	LENGTH	HEIGHT	AGE	SEX	GRAVID	COMMENT
E. lineolata		1	01-Aug-02	71			7.0_	F	0117111	25°C
L. higginsii	02	L	07-May-02					F	Y	13.5°C. Used for propagation at Genoa Nat. Fish Hatchery. 300 SMB w/ progeny released to Station 68 May 29, 2002. 16, 500 Juv's. (Est).
L. higginsii	02	L	13-May-02	72						TISSUE SAMPLE TAKEN.11.1°C
L. higginsii	08	L	13-May-02	72	93	75	16	F	N	TISSUE SAMPLE TAKEN.11.1°C
L. higginsii	08	L	31-Jul-02	70		•				TRANSLOCATED HERE BY HAVLIK, APRIL 2002. ORIGINALLY FROM STH 12 RELOCATION.25°C
L. higginsii	151	L	31-Jul-02	70	77	52	11	М		TISSUE SAMPLE TAKEN. ORIGINALLY FROM STATION 71, ~071402, BY BER.25°C
L. higginsii	931	L	31-Jul-02	38	87	62	14	М		TISSUE SAMPLE TAKEN. TRANSLOCATED TO STAT. 70.25°C
L. higginsii	932	L	31-Jul-02	71	66	54	7	F	N	TISSUE SAMPLE TAKEN. TRANSLOCATED TO STATION 70.25°C
L. higginsii	933	L	31-Jul-02	71	75	57	13	F	N	TISSUE SAMPLE TAKEN. TRANSLOCATED TO STATION 70.25°C
L. higginsii	934	L	01-Aug-02	71	94	69	18	F	N	TISSUE SAMPLE TAKEN. TRANSLOCATED TO STATION 70. STERILE FEMALE-NO BLACK MARGINS ON DEMIBRANCHS.25°C
L. siliquoidea	LSW1	L	31-Jul-02	71	76	54	8	F	N	TISSUE SAMPLE TAKEN. TRANSLOCATED TO STATION 70.25°C
L. siliquoidea	LSW2	L	31-Jul-02	38	90	48	11	F		TISSUE SAMPLE TAKEN. TRANSLOCATED TO STAT. 70. UNCERTAIN OF SEX.25°C
L. siliquoidea	LSW3	L	31-Jul-02	38	99	49	15	F		TISSUE SAMPLE TAKEN. TRANSLOCATED TO STAT. 70. UNCERTAIN OF SEX.25°C
P. cyphyus	15	L	13-May-02	72	74	53	14			11.1 °C

References Used

Havlik, Marian E. 2003. U.S. Hwy 12 Wisconsin River mussel survey and trasnlocation, Sauk and Dane counties, Wisconsin, May 2002. Final Report. WDOT Proj. ID 5300-03-02/75. Malacol consult., La Crosse, WI. 24 pp.

APPENDIX 1.

COPIES OF FIELD DATA SHEETS.

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viea Sa. eul	(m-) Ira	in or Sta	at.#	Sta	ı. Dist. I	From	า Ban	k(m) 5	Ba	ink (L	or R):	10	H2C) C:	25		
O-0 %ars	Depth(m) 3	3086	IKAII	0/ 5	%be	droc	K	%	nardp	an	%b	oulder_			6rubbi	е	
Method (circ	evel <u>20</u> %coa ele one): 1=rande	om ot	2=tra	nsect	ne sand	FO CO		%muc	K&S	llt	%0	lay		%del	tritus		
7=harvest sa	ample 8=cumm	unity re	l. abur	n. 9=ir	ocreme	ental	coll.	(by)	Othe	e or ass	00.05	targe	eted t	axon		
Crew (circle	collector):	de	UW	DILLIU	611	21						1 360		-			
Directions:	Wwillow	1-101	me	61	1006	25.	4	540	fe.	-5e	70	57	9	86	ada	-	-
June	romer)	100	rely'	9 10		6	Up	111 01	138		1000	. 1	/				
Comments:	1 110,110	/	1,00	4	ne	(0	C.	5.2	C .	011	1€	tou	4		54		
2/ 120	Vinter 1	ue	n	95	1	57	0 0	2.	19	T+	1400	75	ma	Oon	fus	tr	V .
43 12		12						C	7-31	-02	G.62	43	18	5.4	1891	43	1000
12 18	5.1, 89 43	100	100	8-1-1	1 0	43	18	510,	89		/				-		
1120	V'5 211N									-			- /			- 0	_
47.45	18' 5,2"N axon 43'40.2W	Tot	al#	100					-	all	nter	10	ten	Fag.	5 lu	130	N
89 T	axon 43 40.20		taxon						1	900	new	r su	1:	0			
		Living	Dead	Length	Height	Age	Sex	Gravid	Tag	Pres	Length	Height	Age	Sex	Gravid	Tag	Pres
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1 211	107dea	-		-	-	-	-		08								
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State of Wisconsin Department of Natural Reso	urces													vey Fo	
		1 .	. 1		-										
WBIC: //79900 Si Date (mmddyy): 1/31 08	neet	W/ater	hody	110	T	R:		Sour	ce Co	de:		_	1	_	W
7.5' Quad.:		uadco	ode:		_		at.	- 3	,	u Name	: F~	ona.		Sac	"W
T_10 N, R 08,836, of	Swof	of N	6.		Co	D.:	57		. Fac	0 R. M	9	(58	-	**
TN, R,S,of	of	_of		Co					USA	COER	Mi;				
7.5' Quad.: T 10 N, R 10,S 26,	an or St	at.# 3	8 Sta	. Dist.	Fron	Ban	k(m)	Ba	ank (L	or R):_	R	_H20	O C:_	25.	2
Current / Depth(m) 1.5	_2082	IKA	E	%De	caroc	K	%	hard	oan	%b	oulder		9	%rubbl	е
Method (circle one): 1=rand	om pt.	2=tra	nseci	3=sho	re co	II. 4	_76muc =invent	kas honv	5=rar	%(e & acc	no 6:	-torn	%de	tritus	
/=harvest sample 8=cumm	iunity re	l, abu	n. 9=ir	ncreme	ental	coll.	(by).	Othe	r: 4	his	90		se	neh
Crew (circle collector):	1960	C.,	for car	5 6	~1	164	11 1	ne	111	100	3(2)				
Directions: upsteam	of ric	raj	A10	9 6	120	(0,111	9€	100	9/2.	, 1	00	1		
Comments: Tissue sa	mple	1	hon	01	1.	6.0	110		ćn.	Ran	4.50	0			
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(statun # 70)									(74			1.	, 0	0	/
									100						
	1					-			9 70					17/10	
	Tot	al#							Net						
Taxon		axon							. /						
	Living	Dead	Length	Height	Age				Pres	Length	Height	Age	Sex	Gravid	Tag Pr
Lompsilis Hig.	-		87	42	14	M	-	931	Y	7/35	10	Su.	tu	Len	
v 11	-		66	54	7	-		933	_				_		
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							20 -								

APPENDIX 2.

PHOTOS OF MUSSELS COLLECTED AT PRAIRIE DU SAC DURING 2002.

















5. stilippointes, West, Pr., Praide der Barr. Tager Libert, 2 April 1985, St. 76.

